



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

**D350-748-203**  
**Job Sheet 200616**



Part No: D350-748-203

Job Qty: 1 pcs

Part Name: AS350 / AS355 Stainless Steel Aft Crosstube



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 9/13/19

Job Tracking No:

Due Date: 10/18/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: D350-748-243 REV:A IPP REV:A 15.03.23 NEW ISSUE DD VERF;JLM

Ship Via:

## Bill of Materials

## Job Routing

| Op No | Operation             | Qty   | Start Date | Due Date | Standard Setup Hrs | Run Hrs | Workcenter/Supplier  | Workcenter / Supplier | Lead Time | Sign-off |
|-------|-----------------------|-------|------------|----------|--------------------|---------|----------------------|-----------------------|-----------|----------|
| 110   | Crosstubes - Bend - 1 | 1 pcs |            | 10/18/19 | 0.50               | 2.44    | Crosstubes - Bend    |                       |           |          |
| 127   | QC 15                 | 1 pcs |            | 10/18/19 | 0.00               | 0.00    | QC 15 - 12           |                       |           |          |
|       |                       |       |            |          |                    |         | QC 15 - 3            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 15 - 47           |                       |           |          |
|       |                       |       |            |          |                    |         | QC 15 - 49           |                       |           |          |
|       |                       |       |            |          |                    |         | QC 15 - 58           |                       |           |          |
|       |                       |       |            |          |                    |         | QC 15 - 9            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 15 - 68           |                       |           |          |
| 128   | Crosstubes - 3 - B4B  | 1 pcs |            | 10/18/19 | 0.00               | 1.98    | Crosstubes - 1 - B4B |                       |           |          |
|       |                       |       |            |          |                    |         | Crosstubes - 2 - B4B |                       |           |          |
|       |                       |       |            |          |                    |         | Crosstubes - 3 - B4B |                       |           |          |
|       |                       |       |            |          |                    |         | Crosstubes - 4 - B4B |                       |           |          |
| 130   | Crosstubes - 4 - B4B  | 1 pcs |            | 10/18/19 | 0.00               | 2.89    | Crosstubes - 1 - B4B |                       |           |          |
|       |                       |       |            |          |                    |         | Crosstubes - 2 - B4B |                       |           |          |
|       |                       |       |            |          |                    |         | Crosstubes - 3 - B4B |                       |           |          |
|       |                       |       |            |          |                    |         | Crosstubes - 4 - B4B |                       |           |          |
| 140   | QC 5                  | 1 pcs |            | 10/18/19 | 0.00               | 0.00    | QC 5 - 10            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 12            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 17            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 18            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 19            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 22            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 24            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 3             |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 43            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 49            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 51            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 58            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 68            |                       |           |          |
|       |                       |       |            |          |                    |         | QC 5 - 9             |                       |           |          |

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CANADA  
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Container No: S225280



Part: D350-748-203

Job No: 200616

Serial No/Batch: S225280

Revision: Rev A

Inspector:

Exp Date:

Instructions: TC STC SH06-27 Issue 2, FAA STC SR02359NY 11/03/04, EASA S

|                                       |          |          |           |                           |  |  |
|---------------------------------------|----------|----------|-----------|---------------------------|--|--|
|                                       |          |          |           | QC 5 - 60                 |  |  |
|                                       |          |          |           | QC 5 - 30                 |  |  |
|                                       |          |          |           | QC 5 - 40                 |  |  |
|                                       |          |          |           | QC 5 - 61                 |  |  |
|                                       |          |          |           | QC 5 - 81                 |  |  |
| 174 Outsource - 2 - NDT per<br>QSI038 | 1<br>pcs | 10/18/19 |           | SKY002-VC                 |  |  |
| 176 Packaging 2-1 - Receive - B4B     | 1<br>pcs | 10/18/19 | 0.00 0.00 | Packaging 2 - 1 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 2 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 3 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 5 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 4 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 6 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 7 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 8 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 9 - B4B     |  |  |
|                                       |          |          |           | Packaging 2 - 10 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 11 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 12 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 13 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 14 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 15 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 16 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 17 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 18 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 19 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 20 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 21 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 22 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 23 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 24 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 25 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 26 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 27 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 28 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 29 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 30 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 31 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 32 -<br>B4B |  |  |
|                                       |          |          |           | Packaging 2 - 33 -<br>B4B |  |  |

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NOV 15 2019

|                                    |          |          |           |                        |             |
|------------------------------------|----------|----------|-----------|------------------------|-------------|
| 178 QC 6                           | 1<br>pcs | 10/18/19 | 0.00 0.00 | Packaging 2 - 34 - B4B |             |
|                                    |          |          |           | Packaging 2 - 35 - B4B |             |
|                                    |          |          |           | Packaging 2 - 36 - B4B |             |
|                                    |          |          |           | QC 6 - 9               |             |
| 180 Spray Paint - 2 - B4B          | 1<br>pcs | 10/18/19 | 0.00 1.07 | QC 6 - 68              |             |
|                                    |          |          |           | QC 6 - 61              | DAS         |
|                                    |          |          |           | QC 6 - 40              | 81          |
|                                    |          |          |           | QC 6 - 81              | 9-89        |
| 190 QC 14                          | 1<br>pcs | 10/18/19 | 0.00 0.00 | Spray Paint - 1 - B4B  | NOV 18 2019 |
|                                    |          |          |           | Spray Paint - 2 - B4B  | DAS         |
|                                    |          |          |           | Spray Paint - 3 - B4B  | 41          |
|                                    |          |          |           | Spray Paint - 4 - B4B  | 9-89        |
| 200 Crosstubes - 5 - B4B           | 1<br>pcs | 10/18/19 | 0.00 2.89 | QC 14 - 15             |             |
|                                    |          |          |           | QC 14 - 2              |             |
|                                    |          |          |           | QC 14 - 34             |             |
|                                    |          |          |           | QC 14 - 41             |             |
| 210 QC 5                           | 1<br>pcs | 10/18/19 | 0.00 0.00 | QC 14 - 51             |             |
|                                    |          |          |           | QC 14 - 58             |             |
|                                    |          |          |           | QC 14 - 59             |             |
|                                    |          |          |           | QC 14 - 9              | DAS         |
| 220 Packaging 1-1 - Pick Kit - B4B | 1<br>pcs | 10/18/19 | 0.00 0.00 | QC 14 - 68             | NOV 18 2019 |
|                                    |          |          |           | QC 14 - 40             | 68          |
|                                    |          |          |           | QC 14 - 19             | 9-89        |
|                                    |          |          |           | QC 14 - 43             |             |
|                                    |          |          |           | QC 14 - 24             |             |
|                                    |          |          |           | QC 14 - 61             |             |
|                                    |          |          |           | QC 14 - 81             |             |
|                                    |          |          |           | Crosstubes - 1 - B4B   |             |
|                                    |          |          |           | Crosstubes - 2 - B4B   |             |
|                                    |          |          |           | Crosstubes - 3 - B4B   | DAS         |
|                                    |          |          |           | Crosstubes - 4 - B4B   | 41          |
|                                    |          |          |           | QC 5 - 10              | NOV 18 2019 |
|                                    |          |          |           | QC 5 - 12              | 9-89        |
|                                    |          |          |           | QC 5 - 17              |             |
|                                    |          |          |           | QC 5 - 18              |             |
|                                    |          |          |           | QC 5 - 19              |             |
|                                    |          |          |           | QC 5 - 22              |             |
|                                    |          |          |           | QC 5 - 24              |             |
|                                    |          |          |           | QC 5 - 3               |             |
|                                    |          |          |           | QC 5 - 43              |             |
|                                    |          |          |           | QC 5 - 49              |             |
|                                    |          |          |           | QC 5 - 51              |             |
|                                    |          |          |           | QC 5 - 58              | DAS         |
|                                    |          |          |           | QC 5 - 68              | NOV 20 2019 |
|                                    |          |          |           | QC 5 - 9               | 68          |
|                                    |          |          |           | QC 5 - 50              | 9-89        |
|                                    |          |          |           | QC 5 - 30              |             |
|                                    |          |          |           | QC 5 - 40              |             |
|                                    |          |          |           | QC 5 - 61              |             |
|                                    |          |          |           | QC 5 - 81              |             |
|                                    |          |          |           | Packaging 1 - 1 - B4B  | ✓           |
|                                    |          |          |           | Packaging 1 - 2 - B4B  | Oscar       |
|                                    |          |          |           | Packaging 1 - 3 - B4B  |             |
|                                    |          |          |           | Packaging 1 - 4 - B4B  |             |
|                                    |          |          |           | Packaging 1 - 5 - B4B  |             |
|                                    |          |          |           | Packaging 1 - 6 - B4B  |             |
|                                    |          |          |           | Packaging 1 - 7 - B4B  |             |
|                                    |          |          |           |                        |             |
|                                    |          |          |           |                        |             |
|                                    |          |          |           |                        |             |

|          |     |          |           |                        |          |
|----------|-----|----------|-----------|------------------------|----------|
|          |     |          |           | Packaging 1 - 8 - B4B  |          |
|          |     |          |           | Packaging 1 - 9 - B4B  |          |
|          |     |          |           | Packaging 1 - 10 - B4B |          |
|          |     |          |           | Packaging 1 - 11 - B4B |          |
|          |     |          |           | Packaging 1 - 12 - B4B |          |
|          |     |          |           | Packaging 1 - 13 - B4B |          |
|          |     |          |           | Packaging 1 - 14 - B4B |          |
|          |     |          |           | Packaging 1 - 15 - B4B |          |
|          |     |          |           | Packaging 1 - 16 - B4B |          |
|          |     |          |           | Packaging 1 - 17 - B4B |          |
|          |     |          |           | Packaging 1 - 18 - B4B |          |
|          |     |          |           | Packaging 1 - 19 - B4B |          |
|          |     |          |           | Packaging 1 - 20 - B4B |          |
|          |     |          |           | Packaging 1 - 21 - B4B |          |
|          |     |          |           | Packaging 1 - 22 - B4B |          |
|          |     |          |           | Packaging 1 - 23 - B4B |          |
|          |     |          |           | Packaging 1 - 24 - B4B |          |
|          |     |          |           | Packaging 1 - 25 - B4B |          |
|          |     |          |           | Packaging 1 - 26 - B4B |          |
|          |     |          |           | Packaging 1 - 27 - B4B |          |
|          |     |          |           | Packaging 1 - 28 - B4B |          |
|          |     |          |           | Packaging 1 - 29 - B4B |          |
|          |     |          |           | Packaging 1 - 30 - B4B |          |
|          |     |          |           | Packaging 1 - 31 - B4B |          |
|          |     |          |           | Packaging 1 - 32 - B4B |          |
|          |     |          |           | Packaging 1 - 33 - B4B |          |
|          |     |          |           | Packaging 1 - 34 - B4B |          |
|          |     |          |           | Packaging 1 - 35 - B4B |          |
|          |     |          |           | Packaging 1 - 36 - B4B |          |
| 230 QC 4 | 1   | 10/18/19 | 0.00 0.00 | QC 4 - 28              | 230 QC 4 |
|          | pcs |          |           | QC 4 - 58              |          |
|          |     |          |           | QC 4 - 69              |          |
|          |     |          |           | QC 4 - 9               |          |
|          |     |          |           | QC 4 - 46              |          |
|          |     |          |           | QC 4 - 68              |          |
|          |     |          |           | QC 4 - 72              |          |
|          |     |          |           | QC 4 - 74              |          |

|                                  |          |          |           |                        |      |
|----------------------------------|----------|----------|-----------|------------------------|------|
| 240. Packaging 3-1 - Stock - B4B | 1<br>pcs | 10/18/19 | 0.00 0.00 | QC 4 - 75              | DAS  |
|                                  |          |          |           | Packaging 3 - 1 - B4B  | 69   |
|                                  |          |          |           | Packaging 3 - 2 - B4B  | 9-89 |
|                                  |          |          |           | Packaging 3 - 3 - B4B  |      |
|                                  |          |          |           | Packaging 3 - 4 - B4B  |      |
|                                  |          |          |           | Packaging 3 - 5 - B4B  |      |
|                                  |          |          |           | Packaging 3 - 6 - B4B  |      |
|                                  |          |          |           | Packaging 3 - 7 - B4B  |      |
|                                  |          |          |           | Packaging 3 - 8 - B4B  |      |
|                                  |          |          |           | Packaging 3 - 9 - B4B  |      |
|                                  |          |          |           | Packaging 3 - 10 - B4B |      |
|                                  |          |          |           | Packaging 3 - 11 - B4B |      |
|                                  |          |          |           | Packaging 3 - 12 - B4B |      |
|                                  |          |          |           | Packaging 3 - 13 - B4B |      |
|                                  |          |          |           | Packaging 3 - 14 - B4B |      |
|                                  |          |          |           | Packaging 3 - 15 - B4B |      |
|                                  |          |          |           | Packaging 3 - 16 - B4B |      |
|                                  |          |          |           | Packaging 3 - 17 - B4B |      |
|                                  |          |          |           | Packaging 3 - 18 - B4B |      |
|                                  |          |          |           | Packaging 3 - 19 - B4B |      |
|                                  |          |          |           | Packaging 3 - 20 - B4B |      |
|                                  |          |          |           | Packaging 3 - 21 - B4B |      |
|                                  |          |          |           | Packaging 3 - 22 - B4B |      |
|                                  |          |          |           | Packaging 3 - 23 - B4B |      |
|                                  |          |          |           | Packaging 3 - 24 - B4B |      |
|                                  |          |          |           | Packaging 3 - 25 - B4B |      |
|                                  |          |          |           | Packaging 3 - 26 - B4B |      |
|                                  |          |          |           | Packaging 3 - 27 - B4B |      |
|                                  |          |          |           | Packaging 3 - 28 - B4B |      |
|                                  |          |          |           | Packaging 3 - 29 - B4B |      |
|                                  |          |          |           | Packaging 3 - 30 - B4B |      |
|                                  |          |          |           | Packaging 3 - 31 - B4B |      |
|                                  |          |          |           | Packaging 3 - 32 - B4B |      |
|                                  |          |          |           | Packaging 3 - 33 - B4B |      |
|                                  |          |          |           | Packaging 3 - 34 - B4B |      |
|                                  |          |          |           | Packaging 3 - 35 - B4B |      |
|                                  |          |          |           | Packaging 3 - 36 - B4B |      |

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|                  |       |          |           |                 |  |
|------------------|-------|----------|-----------|-----------------|--|
| 245 DC - 1 - B4B | 1 pcs | 10/18/19 | 0.00 0.00 | DC - 1 - B4B    |  |
|                  |       |          |           | DC - 2 - B4B    |  |
| 250 QC 21 - FG   | 1 pcs | 10/18/19 | 0.00 0.00 | QC 21 - FG - 21 |  |
|                  |       |          |           | QC 21 - FG - 70 |  |
|                  |       |          |           | QC 21 - FG - 53 |  |

Part Op 110 - CNC Alpha 160 Bender - Bend tube as per Dwg D350-748-243 using CNC bender program D350A and Folio  
 Descriptions: FT \*\*\*\*\*UNDER BEND .225" PER SIDE\*\*\*\*\* USE (4) DT9824 SHIM BLOC TO CHECK STRAIGHTNESS\*\*\*\*\*  
 127 - QC15- Crosstube Dimensional Check \*\*\*MARK CUT LINES\*\*\*  
 128 - Crosstubes - CUT TUBE AT HEIGHT ON FAI SHEET VERF HEIGHT 31.400" BY QC 15 LEVEL INSPECTOR  
120-3  
 130 - Crosstubes - 1- Drill Tube as per Dwg D350-748-243 Using DT8876 Drill Jigs, set-up drill table as per QSI 010. 2-  
 Deburr 3- Engrave Part # and Batch # as per Dwg D350-748-243 4- Remove all marks from tube within limits of D350-  
 748-243  
 140 - QC5- Inspect part completeness to step on W/O  
 174 - ISSUE P/O TO SKY SERVICE: 45097  
 176 - Receive & Inspect for Damage & Mat'l Certs  
 178 - QC6- All purchased or subcontracted products  
 180 - Spray Paint / NDT Room \*\*\*VERIFY BY RD BATCH # TO MATCH W/O 200616 \*\*\*MASK  
 SCRIBE B# & P# AND VERIFY\*\*\* 1. Apply Axalta 13205S Cleaner inside and outside crosstube per QSI 005 4.1.4  
 BATCH: 5138949 2. Axalta 230S Metalok inside and outside crosstube per QSI 005 4.1.4 BATCH: M138021 3.  
 Prime inside and outside crosstube per QSI 005 4.2 BATCH: 5189223 4. Paint outside of crosstube per QSI 005 4.2  
 BATCH: 5231052  
 190 - QC14- Inspect Spray Paint - Then, Wrap in plastic bag to protect from scratches \*\*\*VERIFY BY 66 BATCH  
 # TO MATCH W/O 200616  
 200 - Crosstubes - INSTALL GROUND WIRE INSERT, THEN INSERT SCREW AND WASHER \*\*\*LIMIT AIR PRESSURE  
 TO 50 PSI WHEN INSTALLING AETC-1032 INSERT AND ONLY EXPAND INSERT ONCE\*\*\* 1-Abrade mating surfaces  
 of support and crosstube with 180 grit sandpaper, clean the area with MEK or equivalent as per dwg 2-Install supports  
 with Proseal 890 per D350-748-243 and QSI 015 A/R Proseal 890 Batch: 5229895 EXP: 3/20 3-  
 Install supports clamps Using Dt8876 as per Dwg D350-748-243, Torque to 60-80 IN-LBS. PROSEAL CURE TIME 72  
 HOURS: Start: 19-11-17 Finish: 19-11-20  
 210 - QC5- Inspect part completeness to step on W/O \*\*\*RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS  
 CURED FOR 72HOURS AS PER DWG.\*\*\* \*\*VERIFY BY \_\_\_\_\_ BATCH # TO MATCH W/O \_\_\_\_\_  
 220 - Pick Kit  
 230 - QC4- 100% Inspect kits for completeness \*\*\*VERIFY BY \_\_\_\_\_ BATCH # TO MATCH W/O \_\_\_\_\_  
 240 - Identify and pack for shipping as per PPPD350-748-203 Location: \_\_\_\_\_ PPP Rev: \_\_\_\_\_  
 245 - Document Control - Photocopy bluefile & type labels per PPPD350-748-203 CHG001  
 250 - QC21- Final Inspection - Work Order Release

## Job BOM

| Part / Item     | Component Name                   | Quantity      | Operation                          | Container            |
|-----------------|----------------------------------|---------------|------------------------------------|----------------------|
| D350-748-243TRN | Crosstube Installation, High Alt | 1 pcs (1 ea)  | 110-Crosstubes - Bend - 1          | S219482              |
| AETC-1032       | Insert                           | 1 Ea (1 ea)   | 200-Crosstubes - 5 - B4B           | F M137335            |
| D3502-1         | Support                          | 2 pcs (2 ea)  | 200-Crosstubes - 5 - B4B           | S185464              |
| D5123-7         | Clamp Cushion                    | 2 pcs (2 ea)  | 200-Crosstubes - 5 - B4B           | 163264               |
| MS21920-20      | Clamp                            | 2 Ea (2 ea)   | 200-Crosstubes - 5 - B4B           | S103843              |
| NAS1149C0383R   | Washer (AN960C10)                | 1 Ea (1 ea)   | 200-Crosstubes - 5 - B4B           | S181423              |
| MS51958-63      | Screw                            | 1 pcs (1 ea)  | 200-Crosstubes - 5 - B4B           | F M134962            |
| AN4-41A         | Bolt                             | 8 Ea (8 ea)   | 220-Packaging 1-1 - Pick Kit - B4B | S058981              |
| AN4-3A          | Bolt                             | 16 Ea (16 ea) | 220-Packaging 1-1 - Pick Kit - B4B | S21153969Y S22877867 |
| AN5-32A         | Bolt                             | 4 Ea (4 ea)   | 220-Packaging 1-1 - Pick Kit - B4B | S119858              |
| D3500-1         | Saddle                           | 4 pcs (4 ea)  | 220-Packaging 1-1 - Pick Kit - B4B | S133673              |
| D3501-1         | Bushing                          | 16 Ea (16 ea) | 220-Packaging 1-1 - Pick Kit - B4B | S217032              |
| MS21042L4       | Nut                              | 24 Ea (24 ea) | 220-Packaging 1-1 - Pick Kit - B4B | S25610               |
| MS21042L5       | Nut                              | 4 Ea (4 ea)   | 220-Packaging 1-1 - Pick Kit - B4B | S214642              |
| NAS1149D0483J   | Washer                           | 32 Ea (32 ea) | 220-Packaging 1-1 - Pick Kit - B4B | S228778-1            |
| NAS1149D0563J   | Washer                           | 8 Ea (8 ea)   | 220-Packaging 1-1 - Pick Kit - B4B | S174288              |

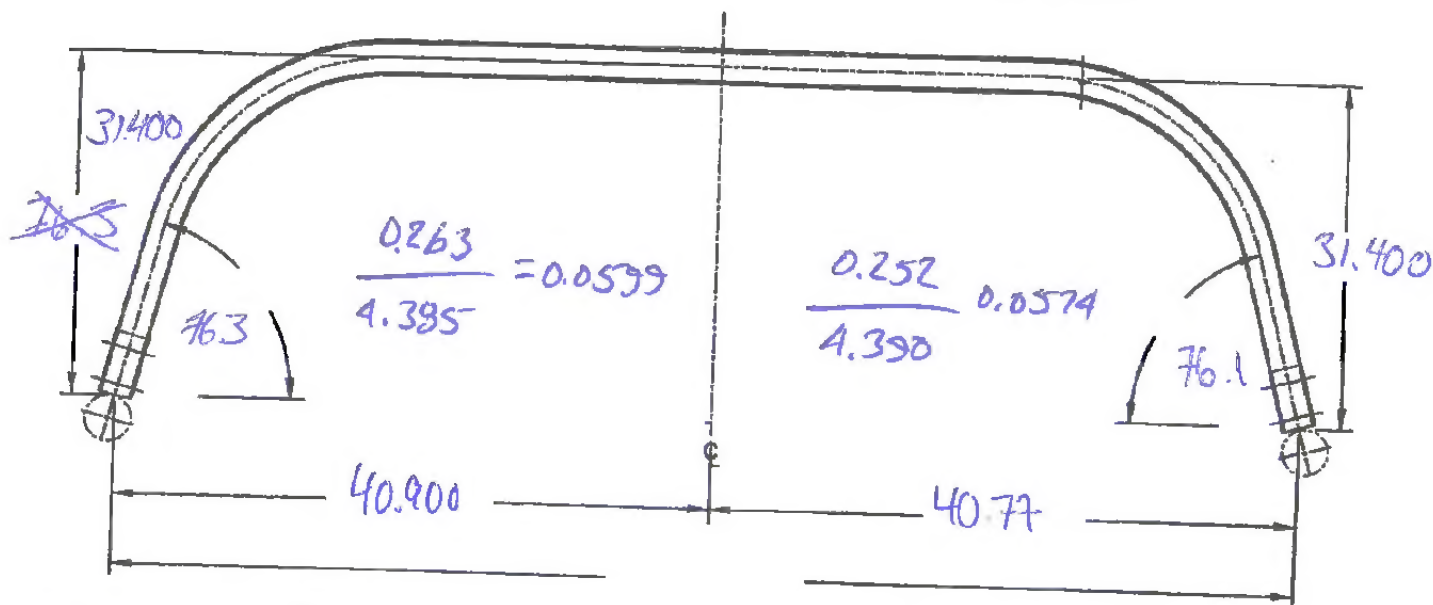
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| Job Allocations                                       |                 |          |           |           |
|-------------------------------------------------------|-----------------|----------|-----------|-----------|
| Operation                                             | Component Part  | Required | Inventory | Allocated |
| 110-Crosstubes - Bend - 1<br>200-Crosstubes - 5 - B4B | D350-748-243TRN | 1        | 3         | 0         |
|                                                       | AETC-1032       | 1        | 10        | 0         |
|                                                       | D3502-1         | 2        | 42        | 0         |
|                                                       | D5123-7         | 2        | 247       | 0         |
|                                                       | MS21920-20      | 2        | 55        | 0         |
|                                                       | MS51958-63      | 1        | 37        | 0         |
| 220-Packaging 1-1 - Pick Kit - B4B                    | NAS1149C0363R   | 1        | 549       | 0         |
|                                                       | AN4-41A         | 8        | 281       | 0         |
|                                                       | AN4-6A          | 16       | 308       | 0         |
|                                                       | AN5-32A         | 4        | 265       | 0         |
|                                                       | D3500-1         | 4        | 31        | 0         |
|                                                       | D3501-1         | 16       | 95        | 0         |
|                                                       | MS21042L4       | 24       | 1,314     | 0         |
|                                                       | MS21042L5       | 4        | 341       | 0         |
|                                                       | NAS1149D0463J   | 32       | 2,529     | 0         |
|                                                       | NAS1149D0563J   | 8        | 1,376     | 0         |
| Part Specifications                                   |                 |          |           |           |
| Specifications could not be found.                    |                 |          |           |           |

Plex 9/13/19 8:27 AM Dart.lajeunesse.marie

|                                                        |               |                     |               |
|--------------------------------------------------------|---------------|---------------------|---------------|
| <b>DART AEROSPACE LTD</b>                              |               | <b>Work Order:</b>  | <i>200616</i> |
| <b>Description:</b> Crosstube High Aft, SS (AS350/355) |               | <b>Part Number:</b> | D350-748-203  |
| <b>Inspection Dwg:</b> D350-748-243                    | <b>Rev:</b> A | Page 1 of 1         |               |

| Required Dimension | Min   | Max   |
|--------------------|-------|-------|
| Height             | 31.10 | 31.60 |
| 1/2 Span           | 40.77 | 41.03 |
| Angle              | 75    | 77    |
| Total Span         | 81.54 | 82.06 |
| Bending Passes     | 7     | --    |
| Crushing           | --    | 8%    |
| Twist              | --    | 0.38  |



*2.061*  
*2.324*  
*2124*  
*2339*

|                     | Side A      | Side B      |
|---------------------|-------------|-------------|
| Bending Passes      | <i>40</i>   | <i>40</i>   |
| Crushing            | <i>6.0%</i> | <i>5.7%</i> |
| Comments            |             |             |
| <i>Twist 0.141"</i> |             |             |
|                     |             |             |
|                     |             |             |

*2069*  
*2.321*

|                 |                         |
|-----------------|-------------------------|
| QC15 Inspection | <b>DAS</b>              |
| Date            | <b>68</b>               |
|                 | <b>9-89 OCT 30 2019</b> |

| Rev | Date     | Change    | Revised by            | Approved           |
|-----|----------|-----------|-----------------------|--------------------|
| A   | 15.09.09 | New Issue | KJ <i>[Signature]</i> | <i>[Signature]</i> |



| Item | Qty | Part Number      | Description                            |
|------|-----|------------------|----------------------------------------|
| 1    | 243 |                  |                                        |
| 1    | X   | D350-748-243     | CROSSTUBE ASSEMBLY (AS 350/355 HI AFT) |
| 2    | 1   | D8021-126        | CROSSTUBE                              |
| 3    | 2   | D3502-1          | SUPPORT                                |
| 4    | 2   | D8123-7          | CLAMP CUSHION                          |
| 5    | 1   | AETC-1032        | INSERT                                 |
| 6    | 2   | M821020-20       | CLAMP                                  |
| 7    | 1   | OR M821020-21/22 | (PER DART SPEC. M-MS21020-20/21/22)    |
| 8    | 1   | NAS1149C363R     | WASHER (OR AN860C10)                   |
| 9    | 1   | NAS1835-3-8      | SCREW (OR MS51859-63)                  |
| 10   | AVR | PROSEAL 880 B-2  | SEALANT, AMS-S-8802 CLASS B-2          |

# GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D8021-126
- 2) FINISH: FINISHED LENGTH AFTER TURNING = 124.70±0.06 (AFTER BENDING/TRIMMING = 122.70 REF)
- 3) FINISH: PRIME INSIDE AND OUTSIDE PER DART Q81 005 4.2
- 4) TOLERANCE: PER DART Q81 005 4.2
- 5) TOLERANCE: PER DART Q81 018 UNLESS OTHERWISE NOTED.
- 6) MIN. ALLOWABLE WALL IS 0.020 FROM NOMINAL
- 7) LIMITS: INCHES UNLESS OTHERWISE NOTED.
- 8) BREAK SHARP EDGES: 0.063 TO 0.010 MAX.
- 9) IDENTIFICATION: PER DART PART NUMBER D350-748-243\* AND BATCH NUMBER ON INSIDE OF CUFF
- 10) WEIGHT: 29.85 lbs
- 11) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR 80, 280 HOLE.
- 12) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 13) TURNING
- 14) BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 15) BENDING
- 16) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES PER SIDE. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D. ON TOP HALF OF BEND, AND 8% ON BOTTOM HALF OF BEND.
- 17) MAX AMPLITUDE OF RIPPING ALONG BENT PORTION OF THE TUBE IS 0.030 (2N A1-3)
- 18) MAX TWIST: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.38 (2N C1-3).
- 19) ASSEMBLY
- 20) TO INSTALL D3502-1 SUPPORT: ABRASIVE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.02" TO 0.05" THICK LAYER OF PROSEAL 880 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 21) TORQUE CLAMPS 80 TO 80 IN-LB. ENSURE AT LEAST 1.8 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TIGHTENING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 880 SEALANT HAS CURED FOR 72 HOURS.

200616 HJS  
19-09-13

DEO ATTACHED

RELEASED

2015 MAR 18

RELEASED

UNDER REVIEW

15/11/16

2015 MAR 18

|           |           |             |          |
|-----------|-----------|-------------|----------|
| REV. A    | NEW ISSUE | DESCRIPTION | DATE     |
| DESIGN    |           |             | 16.01.21 |
| DRAWN     |           |             |          |
| CHECKED   |           |             |          |
| MFG. APPR |           |             |          |
| DE APPR   |           |             |          |
| DATE      | 15.01.21  |             |          |

|                             |                               |
|-----------------------------|-------------------------------|
| DART AEROSPACE LTD          | REV. A                        |
| HAWKESBURY, ONTARIO, CANADA |                               |
| DRAWING NO.                 | D350-748-243                  |
| TITLE                       | CROSSTUBE (AS 350/355 HI AFT) |
| SHEET 1 OF 4                |                               |
| SCALE                       | NTS                           |



|                             |                    |                  |                                         |                         |                                |                           |              |
|-----------------------------|--------------------|------------------|-----------------------------------------|-------------------------|--------------------------------|---------------------------|--------------|
| DRAWING NO.<br>D350-748-243 | TITLE<br>CROSSTUBE | REV. A           | DART AEROSPACE LTD<br>ENGINEERING ORDER |                         | D.E.O. NO.<br>D350-748-243-A-1 | SHEET NO.<br>SHEET 1 OF 1 | SCALE<br>NTS |
| DRAWN<br>15.11.18           | CHECKED<br>ASS     | DATE<br>15.11.18 | MFG. APPR.<br>[Signature]               | APPROVED<br>[Signature] | DATE<br>FEB 19 2016            | DE APPR.<br>[Signature]   |              |
| DATE<br>15.11.18            | DATE<br>15.11.18   | DATE<br>15.11.18 | DATE<br>15.11.18                        | DATE<br>15.11.18        | DATE<br>FEB 19 2016            | DATE<br>2016.02.19        |              |

AMEND NOTE 2 (SHEET 1) AS FOLLOWS:

- 2) FINISH: PREPARE SURFACE PER DART QSI 005 4.1.4  
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
 PAINT OUTSIDE PER DART QSI 005 4.2  
 OR  
 POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3

**RELEASED**  
 2016-02-26  
 16-534

Date:



**WORK ORDER NON-CONFORMANCE / ROUTE UPDATE**

NCR No.

Route update only

| Job: _____                       |                              | DISPOSITION                     |                    | DEPARTMENT/PROCESS                   |  |                     |  | Route update only                                         |  |
|----------------------------------|------------------------------|---------------------------------|--------------------|--------------------------------------|--|---------------------|--|-----------------------------------------------------------|--|
| Part No. _____                   |                              | Rework<br>Scrap<br>Use-as-is    |                    | Cross tube<br>Small Fab<br>Finishing |  |                     |  | Eng. (Non-AW)<br>Prod. Eng. Coord.<br>Rec/Store/Packaging |  |
| Date :                           |                              | Sequence #:                     |                    | QTY Affected :                       |  | MRB (QSK042)        |  |                                                           |  |
| Description Work Order Deviation |                              | Disposition                     |                    | Completed By                         |  |                     |  | Lead hand / Supervisor                                    |  |
| Root Cause                       |                              | FAULT CATEGORY                  |                    |                                      |  | QC / QA Coordinator |  |                                                           |  |
| Operator                         | Pressure/Forced              | Contamination                   | Power Loss/Surge   | Positioned Wrong                     |  |                     |  |                                                           |  |
| Manufacturing Process            | Bending                      | Misaligned/off center           | Folio/Program      | Outside Tolerance                    |  |                     |  |                                                           |  |
| Equip/Tooling                    | Crushing                     | BOM/Route                       | Grain Direction    | Drawing                              |  |                     |  |                                                           |  |
| Handling/Preservation            | Cracks                       | Broken/Damage/Defect            | Weld               | Finish                               |  |                     |  |                                                           |  |
| Material                         | Crimp/Kink/Ripple/Wave/Twist | Incomplete/Unclear Instructions | Wrong Stock Pulled | Part Lost/Missing                    |  |                     |  |                                                           |  |
| Product Improvement              | Marks/Chatter                | Drill Holes                     | Out of Sequence    | Misread                              |  |                     |  |                                                           |  |
| Process Improvement              | Mislabeled                   | Fit/Function                    | Off-set/Set-up     |                                      |  |                     |  |                                                           |  |
| Human Factors                    | Other/Details:               |                                 |                    |                                      |  |                     |  |                                                           |  |



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# **PURCHASE ORDER** **POHB045097**



**Supplier:** SKY002-VC  
Skyservice  
6120 Midfield Road  
Mississauga  
ON  
L5P 1B1 Canada  
Phone: 905-678-5636  
Fax: 905-678-5841

**Attention:** Jenne, Heather

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**PO No:** POHB045097

**PO Date:** 11/13/19

**Due Date:** 11/15/19

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Guerin, Kimberley  
Phone: 613-632-5200 Ext: 298  
kguerin@dartaero.com

**Via:** Ground

**Pynt Terms:** Net 30

**Freight Terms:**

**Special Comments:**

## Items

| Line Item         | Job    | Part         | Drawing            | Description                                                                                                                                                                                                           | Status       | Account | Due Date | Order Quantity | Received Quantity | Balance  | Unit Price (CAD)    | Extended Price  |
|-------------------|--------|--------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------|----------|----------------|-------------------|----------|---------------------|-----------------|
| 1                 | 196268 | D350-748-203 | D350-748-243 Rev A | AS350 / AS355 Stainless Steel Aft Crosstube<br>TC STC SH08-27 Issue 2, FAA<br>STC SR02359NY 11/03/04, EASA<br>STC EASA.10016903 Revision 2<br>10/09/03, BRAZIL 2009S04-04<br>09/04/06<br>ISSUE P/O TO SKY<br>SERVICE: | Firmed<br>X1 | -       | 11/15/19 | 1 pcs          | 0 pcs             | 1 pcs    | \$278.3333/pcs      | \$278.33        |
|                   | 200616 |              |                    |                                                                                                                                                                                                                       | Firmed       | -       | 11/15/19 | 1 pcs          | 0 pcs             | 1 pcs    | \$278.3333/pcs      | \$278.33        |
|                   | 197822 |              |                    |                                                                                                                                                                                                                       | Firmed       | -       | 11/18/19 | 1 pcs          | 0 pcs             | 1 pcs    | \$278.3333/pcs      | \$278.33        |
| <b>Sub Total:</b> |        |              |                    |                                                                                                                                                                                                                       |              |         |          | <b>3</b>       | <b>0</b>          | <b>3</b> |                     | <b>\$835.00</b> |
|                   |        |              |                    |                                                                                                                                                                                                                       |              |         |          |                |                   |          | <b>Grand Total:</b> | <b>\$835.00</b> |

## Order Notes

Procurement Quality Clauses  
A005 right of entry  
A012 chemical and physical test report  
A016 personnel qualification  
A017 raw material identification (as applicable)

A022 Apical Processing  
A024 process certifications  
A026 certification of material conformance

A041 quality management system  
A042 dart notification by supplier  
A043 retention of quality documents

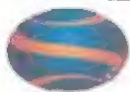
A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 11/15/19 10:24 AM Dart.Guerin.Kimberley





# skyservice Work Order Traveler

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

Sky Service F.B.O. Inc.

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

|                   |                               |               |                       |
|-------------------|-------------------------------|---------------|-----------------------|
| WO #: MWO42545    | Customer: Dart Aerospace Ltd. | Dept: NDT YUL | Reference: POHB045097 |
| Descr:            | PN:                           | S/N:          | Qty: 1                |
| Make:             | Model:                        | Reg:          | A/C S/N:              |
| TSN:              | CSN:                          | TSO:          |                       |
| Task: UNSCHEDULED |                               |               | Sequence: 1           |
| Work Required:    |                               |               |                       |

CARRY OUT NDT ON 3 STAINLESS STEEL AFT CROSSTUBES P/N: D350-748-203, J/S:  
196268, 197822, 200616

| Action Taken:                                                                                                                                           |          | Date:       | Initial/Stamp:                                  |       |         |        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|-------------------------------------------------|-------|---------|--------|
| LPI C/O IAW ASTM E-1417M-16                                                                                                                             |          | NOV 15 2019 | DAS<br>81<br>9-89<br><br>DOT-APP<br>20<br>53-89 |       |         |        |
| ***NO CRACK FOUND***                                                                                                                                    |          |             |                                                 |       |         |        |
| PEN. ZL-67, MPO25403, CLEANER SKC-S MPO13923, DEV. MPO11715<br>, UV LIGHT M-20142                                                                       |          |             |                                                 |       |         |        |
| Miscellaneous AD Review Performed: <input type="checkbox"/> No applicable AD's noted <input type="checkbox"/> Refer to action taken for applicable AD's |          |             |                                                 |       |         |        |
| Description                                                                                                                                             | Location | P/N         | Qty                                             | Batch | S/N Off | S/N On |
|                                                                                                                                                         |          |             |                                                 |       |         |        |
|                                                                                                                                                         |          |             |                                                 |       |         |        |
|                                                                                                                                                         |          |             |                                                 |       |         |        |
|                                                                                                                                                         |          |             |                                                 |       |         |        |
|                                                                                                                                                         |          |             |                                                 |       |         |        |
|                                                                                                                                                         |          |             |                                                 |       |         |        |
|                                                                                                                                                         |          |             |                                                 |       |         |        |

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

|                       |                        |             |
|-----------------------|------------------------|-------------|
| Signature:            | ACA/SCA Stamp          | Date:       |
| Name: RAFIK MELNIKIAN | DOT-APP<br>20<br>53-89 | NOV 15 2019 |